



Rural Poverty in Northern Brazil: an analysis of the socioeconomic profile of Bolsa Família Program beneficiaries

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Abstract

The Bolsa Família Program (PBF) has been the subject of several studies in applied economics. The program was consolidated and assumed centrality in Brazilian social policy, but still, there are few studies on the effectiveness of the program in combating poverty in the rural environment, according to the specificities of the country's regions. In this context, the present work aims to analyze the socioeconomic profile of rural PBF beneficiaries from rural areas in the North of Brazil. Using data from the CadÚnico of the Ministry of Citizenship, the results show a significant number of families in extreme poverty. The survey reveals the precarious living conditions of the beneficiaries of the program, especially with regard to the lack or lack of access to essential public goods. Thus, it is concluded that the PBF is insufficient to meet the basic needs of rural families in the sense of creating social and economic opportunities for them to escape the poverty trap.

Keywords: Social Programs. Scarcity. Rural Families.

Pobreza rural no norte do Brasil: uma análise do perfil socioeconômico dos beneficiários do Programa Bolsa Família

Resumo

O Programa Bolsa Família (PBF) tem sido objeto de vários estudos em economia aplicada. O programa se consolidou e assumiu centralidade na política social brasileira, mas ainda sim, há poucos estudos sobre a efetividade do programa no combate à pobreza no meio rural de acordo com as especificidades das regiões do país. Neste contexto, o presente trabalho tem por objetivo analisar o perfil socioeconômico dos beneficiários rurais do PBF do meio rural na região Norte do Brasil. Utilizando os dados do CadÚnico do Ministério da Cidadania,

os resultados apresentam uma quantidade expressiva de famílias em situação de extrema pobreza. Os resultados da pesquisa revelam as precárias condições de vida dos beneficiários do programa, sobretudo no que se refere à carência ou o não acesso aos bens públicos essenciais. Assim, conclui-se que o PBF se mostra insuficiente para atender as necessidades básicas das famílias rurais no sentido de criar oportunidades sociais e econômicas para que as mesmas escapem da armadilha da pobreza.

Palavras-chave: Programa Sociais. Escassez. Famílias Rurais.

Classificação JEL: I31; I38; O18.

Pobreza rural en el norte de Brasil: un análisis del perfil socioeconómico de los beneficiarios del Programa Bolsa Família

Resumen

El Programa Bolsa Familia (PBF) ha sido objeto de varios estudios en economía aplicada. El programa se consolidó y asumió un papel central en la política social brasileña, pero aún así, hay pocos estudios sobre la efectividad del programa en la lucha contra la pobreza en las zonas rurales de acuerdo con las especificidades de las regiones del país. En este contexto, el presente trabajo tiene como objetivo analizar el perfil socioeconómico de los beneficiarios rurales de PBF de las zonas rurales del norte de Brasil. Usando datos del CadÚnico del Ministerio de Ciudadanía, los resultados muestran un número significativo de familias en extrema pobreza. La encuesta revela las precarias condiciones de vida de los beneficiarios del programa, especialmente con respecto a la falta o falta de acceso a bienes públicos esenciales. Por lo tanto, se concluye que el PBF es insuficiente para satisfacer las necesidades básicas de las familias rurales a fin de crear oportunidades sociales y económicas para que puedan escapar de la trampa de la pobreza.

Palabras clave: Programa Social. Escasez. Familias Rurales.

1 Introduction

With a territorial area of 3.8 million km² and an estimated population of 18,430,980 inhabitants in 2019, around 8.6% of the Brazilian population, the North region covers 45.3% of the national territory, comprising the states of Acre, Amapá, Amazonas, Pará, Rondônia, Roraima and Tocantins. It is home to the largest forest reserve on the planet and one of the largest hydrographic basins.

Several researches portray this region in terms of its biodiversity and environmental potential due to the Amazon. However, the region is marked by differing internal realities, directly reflecting on the standard of living of its population, especially the rural population, which has one of the lowest levels of human development in the country, the second lowest demographic density, explained by its extensive territory. The distances between locations are large and show deficiencies in transport and logistics systems in general, becoming one of the barriers to development (LEITE, 2016).

Of the 773 municipalities in the Legal Amazon¹, only 35 have a Municipal Human Development Index (the HDI-M) equal to or above the national average. The

¹The federal government, bringing together regions with identical economic, political and social problems, with the aim of better planning the social and economic development of the Amazon region, instituted the concept of "Legal Amazon". For more information see: <<http://www.sudam.gov.br/>>. Accessed on: 04/29/2020.

region has the highest social vulnerability indices in the country and some of the worst indices of infrastructure and public services. To give you an idea, in the North region only 7.8% of the municipalities have sewage collection, while in the Southeast this number is 92.9%. Of the total of 18.4 million inhabitants in the region, around 11.5% live in extreme poverty, that is, they earn US\$ 1.90 per day, which is equivalent to a monthly per capita income of around R\$ \$132.72 (IBGE, 2019).

According to Buainain et al. (2013), the percentages of poverty in the North are even more critical when considering only the rural population of this region. The authors estimate that about 35.7% of rural families live below the poverty line. In the South, Southeast and Center-West regions, this percentage of extremely poor families does not exceed 20% of the total population. This fact strengthens the thesis that the strategies to fight poverty should be concentrated mainly in the North and Northeast regions of the country, considering the specificities of each state.

Given this scenario, who are the rural poor in the North? How to measure poverty in rural areas? Most studies relate poverty to family income. According to Ravallion (2016), insufficient income is an essential factor in the misery of families, being a potential variable to measure poverty in a location. For this reason, income transfer policies are developed, in which the main social inclusion program in Brazil is the Bolsa Família Program (PBF).

For Sen (2010), monetary poverty is just one aspect of this complex phenomenon. Sen's (2010) skills approach defines poverty as a deprivation of skills, not just a lack of income. Capabilities are freedoms to lead one way or another of life due to the performance of functions, that is, the various particularities that an individual may consider valuable to have or do.

Therefore, this work aims to analyze the living conditions of poor and extremely poor families served by the Bolsa Família Program (PBF) in rural areas of the northern region of the country, considering multidimensional aspects of poverty. This investigation can favor the formulation and adequacy of complementary public policies to the PBF, considering the specificities of the rural environment of the vast Amazon region.

To fulfill the proposed objective, this work uses descriptive statistics from secondary sources to explain the phenomenon of poverty (BÉRNI, et al. 2002). More specifically, data available in the Single Registry (CadÚnico) of the Ministry of Citizenship, updated for October 2019, were used. These data refer to the total number of people enrolled in the CadÚnico for social projects of the federal government (BRASIL, 2019).

Hereupon, in addition to this introduction, this work is divided into four sections. Section 2 presents the BFP from the perspective of the capabilities approach. Section 3 discusses the PBF in the context of social policies. The characterization of the rural families in the PBF is shown in section 4; and section 5, and final, summarizes the research findings and reflects their policy implications.

2 The Bolsa Família Program from the perspective of the training approach

Development and poverty are complex phenomena that have always inspired economic science and its course of evolution. Different theoretical and

methodological approaches converged to the contemporary view of the multidimensionality of poverty and development as freedom and expansion of capabilities.

The classic view that poverty consists of material deprivation or lack of income is just one dimension of poverty. Sen (2010), an economist-philosopher who received a Nobel Prize in Economics, has argued for some years that poverty actually consists of depriving people of some basic skills that are minimally required of people. What are people really capable of doing and being? What real opportunities are available to them?

According to Sen's (2010) capabilities approach, human freedoms are the fundamental basis for economic development. This theoretical perspective contrasts with more restricted visions of development, such as those that identify development with growth in the Gross National Product (GNP), increase in individual income, industrialization process and technological advance or social modernization.

For Sen (2010), the growth of the GNP and the increase in individual incomes can be very important as a means of expanding the freedoms enjoyed by society. However, freedoms also depend on other determinants, that is, what individuals can actually accomplish is influenced by economic and social opportunities, political freedoms, civil rights and the possibilities of access to health, basic education, and mechanisms of stimulus to their potential.

The absence of freedoms is directly related to economic poverty, which robs individuals of the freedom to satisfy hunger, to obtain satisfactory nutrition or medicine for illnesses, the opportunity to dress or live decently, to have access to water, treated and or basic sanitation. In other cases, deprivation of liberty is closely linked to the lack of public services and social assistance, such as the lack of epidemiological programs, a well-planned health care system or effective institutions for the maintenance of peace and order (Sen,2012).

Sen (2010) argues that protective security is necessary to provide a social safety net, preventing affected people from being reduced to misery and, in some cases, even hunger and death. The field of protective security includes fixed institutional provisions such as unemployment benefits and income supplements for the indigent, as well as ad hoc measures such as food distribution in collective hunger crises or emergency public jobs to generate income for the poorest.

In this perspective, the PBF is inserted in the context of the capabilities approach, because it guarantees immediate subsistence, that is, it provides the necessary material basis for individuals to develop towards greater autonomy (REGO & PINZANI, 2014). Therefore, the State must guarantee to all citizens a conditioned minimum income so that each one can reach a basic autonomy, that is, that set of fundamental capacities that allows them to consider themselves a minimally autonomous individual (VANDERBORGHT ET AL. 2006; SUPPLY, 2006).

In the case of Bolsa Família Program, according to Neri and Campello (2013), the program has a solid instrument of socioeconomic identification, the Single Registry (Single Registry), and with a varied set of benefits, Bolsa Família works to alleviate needs immediate materials, transferring income according to the different characteristics of each family. Furthermore, in the understanding that poverty does not only reflect the deprivation of access to monetary income, Bolsa Família

supports the development of the skills of its beneficiaries by strengthening access to health, education and social assistance services, as well as articulation with a wide range of social programs.

3 Social Policies and the Bolsa Família Program

Social policies should not be compared to simple acts of public charity. According to Sen (2010), they are instruments to promote individual autonomy and create a sense of community. For David Harris (2002), social policies are instruments of citizenship, as they aim to protect a person's status as a full member of the community.

According to Kerstenetzky (2011), the main objectives of social policies are social protection, reducing inequality and poverty, increasing skills, among other things. These social actions can, however, generate consequences for the economic stability and lower costs of the private sector.

The universalization of social policy, for example, contributes to economic activity by reducing transaction costs with security, encouraging entry and promoting flexibility and mobility in the labor market. The institutions of the universal Welfare State thus contribute to the creation of social capital, favoring its legitimacy and stability, allowing the continuity of its economic effects (KERSTENETZKY, 2011).

In Kerstenetzky's (2011) view, the social development doctrine is supported by the formulation that economic policies need to seek the well-being of the population as a whole and that well-being needs to be focused on social investments. This implies that social policies must be directed towards the economy, with a reduction in social assistance and an increase in economic participation and greater productivity.

In this context, for Silva (2014), the PBF can be considered a mass policy, with the potential to “generate policies”, since the fulfillment of conditionalities becomes a two-way street in Brazilian society that questions the citizenship of poorer populations, when, for example, children live far from schools and depend on transportation provided by the city hall to travel, or when rural families have difficulties in complying with medical care due to the cost of public transport.

As already extensively portrayed in the literature, in October 2003, during the Lula Government, the PBF was instituted by the Ministry of Social Development and Fight against Hunger (MDS) based on the integration of the FHC Government's social protection programs (1995-2000), such as Scholarship Program (2001), Food Aid (2001), Gas Aid (2002), Food Card (2003) and, later, the Child Labor Eradication Program (2005). According to Weissheimer (2006), in addition to FHC's social programs, the main inspirations for the PBF were the Minimum Income Guarantee Program by Eduardo Suplicy (1991) and the Minimum Income Program of the Federal District of Cristovam Buarque (1995).

According to Silva et al. (2017), the program's objectives are divided into three axes, namely: immediate poverty alleviation (via income transfer), access to social rights to education, health and social assistance (through conditionalities) and overcoming vulnerability (through complementary programs that favor the development of families). Currently, the PBF is under the responsibility of the

Ministry of Citizenship, and the Federal Government is responsible for financing and executing the program, while the Federal District and municipalities carry out the registration with detailed information on families and carry out social control. Because of this, part of the Program's success stems from its decentralization, as highlighted by Rabelo (2011).

More specifically, according to Mattos (2011), in the decentralized management of the PBF, municipalities identify and register eligible families in the Single Registry for Social Programs (CadÚnico), in addition to updating, monitoring families in compliance with conditionalities, managing the program, investigate and forward complaints to the competent bodies. Together with the federal and state governments, municipalities must guarantee beneficiaries access to health and education services, in addition to establishing partnerships at the three levels with governmental and non-governmental agencies and institutions to provide complementary programs to beneficiaries.

In relation to the states, its obligations include promoting training activities in relation to the registration and updating of the CadÚnico in the municipalities, technical and logistical support to the municipalities, in addition to ensuring the necessary infrastructure for the supply and processing of CadÚnico data. It also concerns the states to ensure that the beneficiaries of Bolsa Família have access to civil documents of personal identification, support for the inclusion of traditional, indigenous and quilombola communities in the CadÚnico, not to mention the use of the registry to articulate complementary actions and programs aimed at beneficiaries and the creation of a State Coordination of the Bolsa Família Program (MATTOS, 2011).

Ruckert et al. (2009) highlight that if families are enrolled in the CadÚnico, even if they are not eligible for the PBF, they can obtain benefits from other social programs. It is noteworthy that, according to the Ministry of Citizenship, only families with up to half the minimum wage per person and/or up to three minimum wages can be enrolled in the CadÚnico. Currently, according to Federal Government Decree No. 9396, of May 30, 2018, the eligibility criterion considers extremely poor people with per capita family income of up to R\$89.01, and poor individuals with per capita family income between R\$89.00 to R\$178.00.

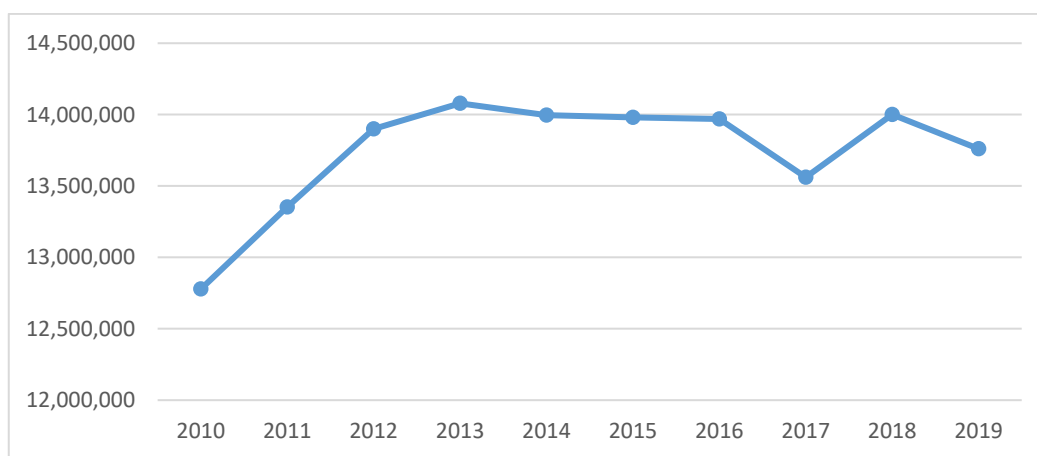
As this is a conditional direct income transfer program, beneficiary families have to comply with requirements in the areas of health and education. More specifically, school attendance of 85% for children and young people from 6 to 15 years old, keeping the vaccine portfolio up to date, nutritional monitoring of children under 7 years old and prenatal care for pregnant women at the basic health unit local. For Rückert et al. (2009), conditionalities serve as mechanisms to break the intergenerational cycle of poverty, enabling better living conditions based on investment in human capital (health and education).

In this perspective, Jorge Castro (2011) suggests that social spending also has economic benefits. In addition to being strategically activated in times of economic crisis, public social spending plays a fundamental role in reconciling the objectives of economic growth and income distribution. In the case of PBF beneficiaries, direct transfers not only contribute to raising household income, but also foster the local domestic market through increased consumption, income and employment.

According to Duarte et al. (2009), in the short term, the income transfer programs aim to alleviate the problems arising from the situation of poverty, while, in the long term, the objective is to invest in human capital, breaking the intergenerational cycle of poverty. The study carried out by the author and her colleagues points out that, on average, 88% of the total amount of resources received by the beneficiaries of the PBF are destined for food consumption. Therefore, the Bolsa Família conditional transfer program has a positive impact on the food consumption of the families selected in that study.

That said, Graph 1 presents an overview of the evolution of the number of beneficiaries from 2010 to 2019.

Graph 1 – Evolution in the number of PBF beneficiaries (2010-2019)



Source: Own elaboration based on data from Ipeadata (2019).

The growth rate in the number of beneficiaries of the PBF was approximately 7.7% in the period between 2010 and 2019. The annual growth rate was around 0.9%, declining a significant drop of 2.9% between 2016 and 2017 and, more recently, a reduction of 1.7% in the number of beneficiaries between 2018 and 2019.

In the Bolsa Família Program, beneficiaries frequently enter and leave the program – that is, it is rotational. The granting of the benefit depends on the number of families served in a given municipality, since a prior estimate is made of how many poor families there are in the area. The transfer of income also depends on the budget that the federal government determined to carry out the program. In the current Covid-19 pandemic scenario, according to data from CadÚnico (2020), the program serves about 14.2 million families across the country, which corresponds to a quarter of the Brazilian population.

According to the JornalNexo report “The Bolsa Família queue and the reduction of beneficiaries”, the year 2019 was marked by the queues at the Bolsa Família, which prevented millions of people from gaining access to the benefit across the country. Under the Bolsonaro government, the program goes through the longest period of restriction on the number of new beneficiaries. In other words, fewer families registered in the CadÚnico, with demonstrably low income and who applied for Bolsa Família were not able to access the benefit. Thus, they form a queue waiting for the transfer.

The same report elucidates that the rotation of the program ends up being asymmetric: if, on the one hand, there are families that continue to leave the program, on the other hand, entry is practically stuck, since there is demand. This implies a reduction in the total number of benefits distributed and an increase in queues to enter the program.

It is worth mentioning that the lack of fulfillment of Bolsa Família in 2020, therefore, is related to the operational part of the release of funds, and not to the number of requests for the benefit. This in a scenario in which the income of the poorest 5% in Brazil fell 39% and, as a consequence, the contingent of the population in extreme poverty increased by 71.8% with the incorporation of about 3.4 million new extreme poor between 2014 and 2018 (IBGE, 2019).

According to the Social Policy Center of the Getúlio Vargas Foundation (CPS/FGV 2019), the increase in extreme poverty between 2014 and 2019 was due to the economic recession, but also to maladjustments in the Bolsa Família (PBF). In this case, due to actual losses in the value of the program's benefit, which was not adjusted for inflation in 2015 and 2017. The CPS/FGV studies show that between 2019 and 2020, about 1.1 million families were disconnected from the program, resulting in the emergence of an average annual queue of 500 thousand families that should be being served. Estimates indicate that almost 1 million families were in line to be assisted in 2019.

The conjunctural factors are added to the structural aspects concerning regional inequalities. From this angle, it is important to understand the characteristics of the PBF beneficiaries according to local specificities, from a multidimensional perspective of poverty, with a view to improving social policy.

4 Characterization of rural beneficiaries of the Bolsa Família Program in Northern Brazil

Although there are other relevant official sources for poverty analysis, such as the Continuous National Household Sample Survey (PNAD-C), Household Budget Survey (POF) and Demographic Census, the choice to work with the CadÚnico data, more specifically with the data from the Bolsa Família Program, it is justified by the wide census coverage of the low-income population.

Furthermore, the data from CadÚnico are an excellent source for the study of multidimensional poverty, as it covers topics such as housing conditions, access to public goods, the labor market, education and income.

Below are some socio-demographic and socioeconomic indicators, in addition to an analysis of the housing conditions of families in poverty, beneficiaries of Bolsa Família, in rural areas in the North of the country.

4.1 Participation of the rural population in the PBF in the states of the North region

The North region commonly appears in academic and political debate as a territory to be developed and integrated into Brazil. In the context of the Legal Amazon, the states of the North region are inserted in an agricultural frontier region for the expansion of capitalist production. According to Castro et al. (2018), the contradictions inherent in the Amazon development process are related to the

promotion of policies aimed at long-term per capita income growth, without considering the aspects of income distribution, social inequality, poverty and environmental costs of this growth.

In this perspective, the expansion of capitalist production in the region reshaped the flows of migrants and ended up involving new segments of the national society, producing agrarian conflicts and tensions between traditional communities and the front of productive activities that are advancing in the region, with mining, the livestock and agribusiness as major protagonists in this clash (CASTRO et al. 2018). Without alleviating poverty, the specific form that development took in the states of the North region continues to impose its dynamics on the region in a complex relationship with its populations and nature.

Regarding the location of families served by the PBF, 34.1% are in rural areas, while 65.9% are in urban areas. In absolute terms, the universe of rural beneficiaries in the North region reaches approximately 578,538 families. Of this total, Acre has the highest relative concentration of rural beneficiaries (43.7%) and Amapá the lowest relative concentration of rural families served by the program (17.6%), as can be seen in Table 1:

Table 1 - Distribution of PBF beneficiary families, by rural and urban location, in the states of the North region (Oct.2019)

FU	Total families with PBF	Receive PBF (urban)		Receive PBF (rural)	
		Nº of families	%	Nº of families	%
AC	86,793	48,827	56.3	37,966	43.7
AP	75,162	61,944	82.4	13,218	17.6
AM	386,846	277,881	71.8	108,965	28.2
PA	924,849	573,826	62.0	351,023	38.0
RO	71,497	47,837	66.9	23,660	33.1
RR	43,598	29,665	68.0	13,933	32.0
TO	109,871	80,098	72.9	29,773	27.1
North	1,698,616	1,120,078	65.9	578,538	34.1

Source: Own elaboration from the CadÚnico (BRAZIL, 2019)

The North region is one of the least developed regions of the country and in this context the PBF has a considerable role for families below the poverty line. In rural areas, this program covers around 2.3 million people, encompassing a contingent of almost 4.2 million people, that is, 54% of the rural population in the region. In the state of Acre, for example, PBF beneficiaries represent 81.3% of its total rural population (201,280):

Table 2 - Participation of rural beneficiaries of the PBF by states in the North region (Oct.2019)

FU	Total Population of the North (2010)	Northern rural population	N° of rural beneficiaries of the PBF	%	%
	(A)	(B)	(C)	C/A	C/B
AC	733,559	201,280	163,709	22.3	81.3
AP	669,526	68,490	53,473	8.0	78.1
AM	3,483,985	728,495	465,467	13.4	63.9
PA	7,581,051	2,389,492	1,328,596	17.5	55.6
RO	1,562,409	413,229	88,392	5.7	21.4
RR	450,479	105,620	56,758	12.6	53.7
TO	1,383,445	293,339	110,368	8.0	37.6
North	15,864,454	4,199,945	2,266,763	14.3	54.0

Source: Own elaboration from the CadÚnico (BRAZIL, 2019)

This general panorama will allow a better characterization of the living conditions of the rural beneficiaries of the PBF, as explained in the following sections.

4.2 Sociodemographic aspects

This part of the work analyzes the sociodemographic variables used to describe the profile of the PBF beneficiaries. Of the total of almost 2.3 million beneficiaries, men and women correspond to 48.3 and 51.7%, respectively. As can be seen in the table below, there are no major differences between males and females, both in the states and in the total of the North region (Table 3).

Table 3 – Distribution of rural beneficiaries of the PBF, by sex, in the states of the North region (Oct.2019).

FU	Total people with BFP	Male		Feminine	
		N° of people	%	N° of people	%
AC	163,709	82,093	50.1	81,616	49.9
AP	53,473	25,279	47.3	28,194	52.7
AM	465,467	228,853	49.2	236,614	50.8
PA	1,328,596	636,151	47.9	692,445	52.1
RO	88,392	42,015	47.5	46,377	52.5
RR	56,758	27,442	48.3	29,316	51.7
TO	110,368	53,598	48.6	56,770	51.4
North	2,266,763	1,095,431	48.3	1,171,332	51.7

Source: Own elaboration from the CadÚnico (BRAZIL, 2019)

Regarding the stratification by color/race, 82% of rural beneficiaries are brown, 8% indigenous and 7% white. Blacks and yellows account for 3% of the total beneficiaries, according to data from the CadÚnico Information Tab (BRASIL, 2019).

The distribution by age group of people served by the program shows that the highest frequency is found in the group of children between 7 and 15 years old, with 27% of the total. On the other hand, there are the groups with less frequency that are the elderly between 60 and 64 years (0.57%) and over 65 years (0.18%). In general, according to Silva et al. (2017), this distribution is justified by the criteria of the program that favors homes with children.

Regarding the education of PBF beneficiaries in the North region, it appears that about 0.21% have incomplete higher education, 40.5% have incomplete primary education and 26.9% had no education (Brasil, 2019). These data include children who are not yet of school age or who are attending some school cycles. The conditions for insertion in the labor market for this population with little education are precarious, given that this situation tends to occur in low-paid informal occupations.

In this context, in light of Sen's (2010) approach, the absence of social opportunities configured in the low level of education of the beneficiaries is clearly evidenced. This low level of education implies a lack of training to participate in economic activities, such as entering government programs for the purchase of food or financing for family farming.

4.3 Socioeconomic aspects

As income is the variable used to measure poverty, when analyzing the family income of rural PBF beneficiaries in the North region, table 4 shows that 98.9% of families earn up to one minimum wage per month, 1% between one and two minimum wages. This is consistent with the program's eligibility criteria, since the cut-off line is fixed at R\$ 178.00 as monthly per capita family income (Table 4).

Table 4 – Profile of rural families in the PBF, by total income range in the Northern States (Oct.2019)

FU	Total families with PBF	Up to a minimum wage		Between one and two minimum wages		Between two and three minimum wages		Above three minimum wages	
		Nº	%	Nº	%	Nº	%	Nº	%
AC	37,966	37,573	99.0	382	1.0	9	0.0	0	0.0
AP	13,218	13,106	99.2	109	0.8	3	0.0	0	0.0
AM	108,965	107,592	98.7	1,347	1.2	22	0.0	1	0.0
PA	351,023	347,911	99.1	3,048	0.9	59	0.0	3	0.0
RO	23,660	23,002	97.2	624	2.6	34	0.1	0	0.0
RR	13,933	13,795	99.0	132	0.9	6	0.0	0	0.0
TO	29,773	29,345	98.6	412	1.4	15	0.1	0	0.0
North	578,530	572,324	98.9	6,054	1.0	148	0.0	4	0.0

Source: Own elaboration from the CadÚnico (BRASIL, 2019)

Drawing a dividing line of poverty between poor and non-poor individuals is a complex task (Rocha, 2006; Athias& Oliveira, 2016, Ravallion, 2015). As there is still no official poverty line in Brazil, this study chose to adopt the income ranges in reais defined by the Bolsa Família Program from Decree No. 9396, of May 30, 2018, of the federal government.

In this context, table 5 records the monthly per capita income of families, highlighting that of the total of nearly 2.3 million rural beneficiaries of the BFP, 88.6% live in extreme poverty (with income of up to R\$ 89, 00), 9.4% live in poverty (with income between R\$89.01 and R\$178.00) and 1.9% are classified as low-income families (with income between R\$178.01 and BRL 499.00), according to data from CadÚnico (Brazil, 2019). About 90% of PBF beneficiaries in the states of Acre, Amapá, Amazonas and Pará are in extreme poverty:

Table 5 – Profile of rural beneficiaries of the PBF, by per capita income bracket in the northern states (Oct.2019).

FU	Total people with BFP	Extreme Poverty		Absolute Poverty		Low Income	
		N°	%	N°	%	N°	%
AC	163,709	145,793	89.1	14,831	9.1	3,085	1.9
AP	53,473	48,216	90.2	4,579	8.6	678	1.3
AM	465,467	420,843	90.4	37,805	8.1	6,819	1.5
PA	1,328,596	1,200,429	90.4	105,324	7.9	22,843	1.7
RO	88,392	51,202	57.9	31,320	35.4	5,870	6.6
RR	56,758	51,877	91.4	4,134	7.3	747	1.3
TO	110,368	91,086	82.5	15,910	14.4	3372	3.1
North	2,266,763	2,009,446	88.6	213,903	9.4	43,414	1.9

Source: Own elaboration from the CadÚnico (BRAZIL, 2019)

The low degree of productive insertion and access to the labor market is an important variable that portrays the poverty situation of families in rural areas. In this context, of the total number of beneficiaries of the PBF in rural areas, 20.8% had performed paid work in the last 12 months and 36.7% had not performed any paid activity in the same period. About 42.6% did not answer this question, which may represent children or elderly people who receive the PBF benefit:

Table 6 - Profile of rural beneficiaries of the PBF, by paid work in the last 12 months, in the northern states (Oct.2019)

FU	Total people with BFP	Yes		No		No replay	
		Nº	%	Nº	%	Nº	%
AC	163,709	23,909	14.6	68,596	41.9	71,204	43.5
AP	53,473	10,335	19.3	19,262	36.0	23,876	44.7
AM	465,467	86,108	18.5	167,015	35.9	212,344	45.6
PA	1,328,596	303,336	22.8	475,140	35.8	550,120	41.4
RO	88,392	16,723	18.9	34,976	39.6	36,693	41.5
RR	56,758	8,786	15.5	21,520	37.9	26,452	46.6
TO	110,368	22,056	20.0	44,410	40.2	43,902	39.8
North	2,266,763	471.253	20.8	830,919	36.7	964,591	42.6

Source: Own elaboration from the CadÚnico (BRAZIL, 2019)

It is important to highlight that, even if the criteria of income and work are adopted to measure poverty, such measures are insufficient to deal with more general aspects of the conditions of scarcity and basic needs, as pointed out by Sen (2010). Probably, an important part of the needs of the beneficiary families of the PBF cannot be met in exclusively monetary terms; there are cases where income becomes an almost irrelevant criterion for defining poverty. Therefore, the effort of this work to analyze aspects other than income to have a broader view of the living conditions of these families, as will be presented below.

4.4 Housing conditions and access to public goods

Considering the living conditions of BPF beneficiaries in the rural area of the North region, most homes have wooden walls (62.8%), followed by masonry/brick (19.8%), rammed earth (6.0%) and straw (2.1%). The states of Amazonas and Acre stand out, whose homes covered with wood cover around 80.3 and 85.7%, respectively. Part of these households are isolated from urban centers, being remote riverside communities. Table 7 summarizes the information about these households.

Table 7 – Profile of the households of rural families in the PBF, by predominant material on the walls, in the northern states (%) (Oct.2019).

FU	Masonry/Brick	wood	Taipa	Straw	Other Material	No reply
AC	6.0	85.7	0.8	0.8	4.5	2.2
AP	16.4	71.1	0.4	0.3	0.6	11.3
AM	5.7	80.3	1.3	2.6	1.6	8.5
PA	24.0	58.2	7.6	1.7	1.4	7.2
RO	12.0	76.7	1.0	0.5	0.3	9.6
RR	18.4	41.5	23.4	5.4	6.6	4.8
TO	59.6	6.9	11.3	7.0	10.9	4.5
North	19.8	62.8	6.0	2,1	2.2	7.1

Source: Own elaboration from the CadÚnico (BRAZIL, 2019)

Access to public services is also an important indicator of the vulnerability of families in poverty. In this context, this work presents information on the profile of the household by type of lighting and an overview of basic sanitation services, involving forms of water supply, the existence of bathrooms in the households and types of sanitary sewage.

According to the CadÚnico Information Tab (2019), with regard to the type of lighting, 43.8% of homes use electricity with its own meter. It is noteworthy that lighting with oil, kerosene, gas, candles and other forms of non-electric energy account for 27% of total households, which highlights the precarious living conditions of remote communities in the North region.

Basic sanitation services are essential for the prevention of diseases, but it should also be considered that in sparsely dense areas such as rural areas, it is appropriate to use individual sanitation solutions such as artesian wells and septic tanks - in this case, the absence of water and sewage network does not necessarily indicate a precarious situation.

Table 8 shows that only a small part of the households is connected to the general water distribution network (19%). The predominant form of water supply is the well or spring (52.6%). Cistern and other forms of supply account for 19.7% of the total.

Table 8 – Profile of households of rural families in the PBF, by form of water supply, in the northern states (Oct.2019).

FU	Total families with PBF	General distribution network		Well or spring		Cistern		Other form		No reply	
		N°	%	N°	%	N°	%	N°	%	N°	%
AC	37,966	2,711	7.1	29,233	77.0	229	0.6	4,829	12.7	964	2.5
AP	13,218	2,053	15.5	7,147	54.1	96	0.7	1,926	14.6	1,996	15.1
AM	108,965	15,749	14.5	43,088	39.5	772	0.7	37,386	34.3	11,970	11.0
PA	351,023	78,580	22.4	179,542	51.1	3,658	1.0	59,013	16.8	30,230	8.6
RO	23,660	760	3.2	19,651	83.1	42	0,2	657	2.8	2,550	10.8
RR	13,933	3,624	26.0	8,710	62.5	38	0.3	643	4.6	918	6.6
TO	29,773	6,726	22.6	16,841	56.6	3,365	11.3	1,397	4.7	1,444	4.9
North	578,538	110,203	19,0	304,212	52.6	8.200	1,4	105,851	18.3	50.072	8,7

Source: Own elaboration from the CadÚnico (BRAZIL, 2019)

It is noteworthy that Rondônia (83.1%) and Acre (83.1) are the states with the highest use of wells and springs to supply rural households. Therefore, without a general water distribution network, it is conjectured that the forms of water storage are precarious in these homes, which may justify the high incidence of sanitary diseases in rural areas in those states.

The sanitary conditions of the rural families benefiting from the PBF are more precarious when considering the existence of sanitary equipment in the residence. According to the CadÚnico Information Tab (2019), almost 71% of households have a bathroom inside the house and 20.4% do not have a bathroom. Acre (58%) and Tocantins (41%) are the states with the highest percentage of homes without a bathroom. If there are no restrooms in rural homes, the sanitary equipment is generally outside the main body of the home, being covered with straw or wooden walls, without covering or toilet.

Access to sanitary sewage is even more precarious, as only 0.6% of rural households in the North region have access to the sewage or river system. The situation is more serious in Pará where the use of rudimentary pit (25.3%) and open ditch (11.7%) is prevalent, as shown in Table 9.

Table 9 – Percentage profile of households of rural families in the PBF, by type of sewage system (Oct.2019)

FU	Sewage or rainwater collection network	Septiccess pool	Rudimentary Septiccess pool	Open ditch	Direct to a river, lake or sea	Other form	No reply
AC	0.1	0.7	1.1	0.5	0.0	0.2	4.0
AP	0.0	0.3	1.0	0.2	0.1	0.1	0.5
AM	0.2	1.7	7.7	2.0	0.2	0.6	6.4
PA	0.2	6.7	25.3	11.7	0.5	2.2	14.1
RO	0.0	0.4	2.5	0.1	0.0	0.1	1.0
RR	0.0	0.3	1.0	0.3	0.0	0.1	0.7
TO	0.1	0.7	1.7	0.2	0.0	0.1	2.4
North	0.6	10.8	40.3	15.0	0.8	3.4	29.1

Source: Own elaboration from the CadÚnico (BRAZIL, 2019)

According to the CadÚnico Information Tab (2019), with regard to the disposal of garbage, the data reveal that in 73% of rural households in the North region, waste is burned or buried on the property. Direct collection reaches only 13% of households in this region.

In short, precarious housing conditions and lack of access to public goods reveal the most perverse form of poverty or deprivation of freedoms. This poverty is invisible to the general public, given the isolated conditions of these families who live in remote rural communities in the northern region of the country.

5 Final considerations

Historically, the North region has remained among those with the worst results in terms of socioeconomic indicators, a reality that has intensified in rural areas. For those families who live in isolated places from large urban centers, as is the case in the researched region, the opportunities for productive insertion and diversification of income sources are smaller.

In this context, there are few studies that portray the living conditions of rural populations in Amazonian territories. The northern region, a fruitful territory for the development of biodiversity research on account of the Amazon, also lacks social research and national public policies. The data presented in this research can contribute to the mapping of this population in order to better understand the multidimensional poverty in these remote rural communities.

In this perspective, it is observed that the resources from the PBF, although they are an important part of the family budget, are insufficient to meet the basic needs of families in order to create social and economic opportunities for them to escape the poverty trap. Therefore, the PBF still lacks a more incisive action for the effectiveness of its purpose of combating poverty, based on the integration of government social programs. This is based on the idea that social protection,

reducing inequality and poverty, and increasing training are part of the objectives of an integrated social policy.

This research highlights that the poverty condition of rural families in the PBF is linked, above all, to the lack or lack of access to essential public services, such as the right to drinking water and basic sanitation. Given the precarious living conditions of these families, the lack of these public goods can be one of the sources of perpetuating poverty, due to the high incidence of tropical diseases caused by poor sanitary conditions in the region, resulting in loss of family income - aspects that deserve to be investigated in future works.

In short, the results of this research indicate that policies to combat poverty in the North region must be designed in such a way as to also take into account the non-monetary dimensions of poverty in order to overcome or at least alleviate them.

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